IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Rosen et al.	
Application No.: 09/960,665	Group Art Unit: 1624
Filed: 9/21/2001	Examiner: B. Kifle
Title: Methods and Compositions for Degradation and/or Inhibition of HER Family Tyrosine Kinases	Confirmation No: 5586
Attorney Docket No.: MSK.P-038-2	
Customer No.: 021121	

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

RESPONSE TO OFFICIAL ACTION

Dear Sir:

This is in response to the Office Action mailed February 5, 2004 for the above-captioned application. Reconsideration and further examination are respectfully requested.

Claims 1, 2, 6, 7 and 12-40 are pending in this application. The examiner has issued an Office Action applicable only to claim 1, stating that the remaining claims are not considered because they are drawn to a non-elected species. This withdrawal is in error. The elected species in this case is the species in which the first and second hsp-binding moieties are each

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I hereby certify that this paper and any attachments named herein are transmitted to the United States Patent and Trademark Office, Fax number: 703-872-9306 on April 15, 2004.

Marina T Larson
Marina T. Larson, PTO Reg. No. 32,038

April 15, 2004
Date of Signature

geldanamycin, and the linker is four carbons in length. Claims 1, 2, 6, 7, 12-17, 30 and 35 are all generic with respect to this species, and therefore must be considered. Furthermore, the alleged art that the Examiner has cited does not meet the limitations of this species. Therefore, the only reason this could be applicable is if the examiner is considering the generic claim. Since the alleged art is not a species within any of the other dependent claims, which are the species that the Examiner should move to after failing to find the first elected species in the art, the refusal to consider claims other than claim 1 is plainly improper.

With respect to the rejection over alleged art, Applicants respectfully submit that this rejection reflects the Examiner's bias against this application, rather than any valid rejection of the claims. This rejection comes after lengthy prosecution leading to an Appeal, and the withdrawal of all prior rejections based on Applicants' Appeal Brief. The Examiner now asserts that because the USPTO does not have a lab to test whether a compound binds to the pocket of hsp90 with which ansamycin antibiotics bind, the compounds of the invention must be interpreted for purposes of prosecution as reading on any compound that has a linker. Applicants respectfully submit that this position is overtly hostile to Applicants, and is unwarranted under applicable law and standards.

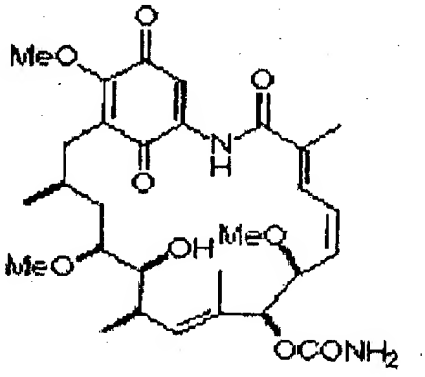
Claim 1 refers to a chemical compound that has first and second hsp-binding moieties which binds to the pocket of hsp90 which binds ansamycin antibiotics. A person reading the specification would understand that the binding referred to is the type of occupancy of the pocket that occurs when an ansamycin antibiotic binds in the pocket. This occupancy leads to degradation of hsp90-dependent proteins. (See Page 1-2 of the specification)

In making the rejection of the claims based on geldanamycin *per se* the Examiner has arbitrarily assigned parts of the molecule as the binding moieties and the linker. This assignment is made without reference to the actual interaction of geldanamycin with the hsp90 pocket. Further, the Examiner threatens that further rejections will be made over even less relevant molecules, for example ethylene glycol. Presumably, this threat is made to force Applicants to accept the position of the Examiner that was not sustained by the conference committee on the Appeal. Such tactics are improper. Further, if the examiner believes other rejections are warranted, they should have been made in this Official Action so as no to further delay the prosecution of this application.

Appln No.: 09/960,665
Amendment Dated: April 15, 2004
Reply to Office Action of February 5, 2004

In rejecting claim 1 as anticipated by Kelland et al,[1] which discloses the structure of geldanamyin. Kelland is not prior art with respect to this application which claims priority from a provisional application filed April 9, 1999, a date which is before Kelland was published. Accordingly, this rejection is improper and should be withdrawn. However, inasmuch as geldanamycin was known, Applicants will address the substance of the rejection here.

Geldanamycin has a structure:



geldanamycin

The Examiner has assigned the ring structure as the binding moiety, the OCO as the linker, and the NH2 as the second binding moiety. What the Examiner has failed to take into account is the fact that when geldanamycin interacts with hsp90 the -OCONH2 group is on the part of the structure that is inserted first into the pocket. (See Stebbins, of record and attached.) Indeed, this is reflected by the fact that this group is at the opposite side of the molecule from the linker in the compositions of the present invention. This group is not free to interact with anything else when it is interacting with hsp90. Similarly, in the context of the postulated

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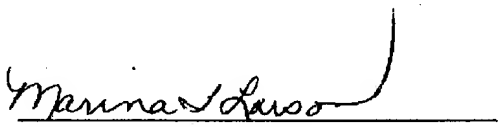
[1] It is noted that Kelland is not listed on any 1449 or 892 in this case, since it was attached only as an exhibit. For the examiner's convenience, a 1449 listing the documents previously attached as exhibits is enclosed.

rejection as anticipated by ethylene glycol, the examiner has not shown, for example by reference to the structure of the pocket, why it is reasonable to expect that such a molecule would bind to the hsp90 binding pocket in any way.

Applicants appreciate that the Examiner does not have testing facilities at his disposal, and would respond, either with test results or amendments, to a rejection based on a compound that reasonably might meet the limitations of the present claims. Such a rejection has not thus far been presented.

For these reasons, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,



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Attachments

PTO 1449